

# ESTIMATED POTATO STOCKS AND PRODUCTION



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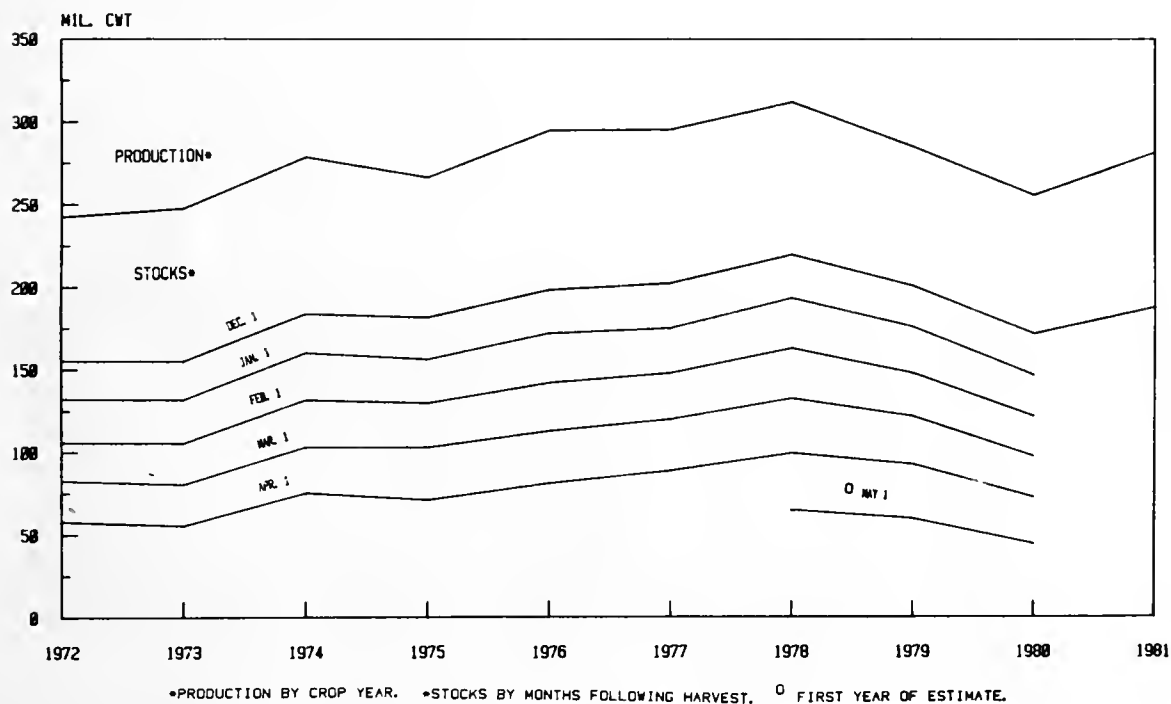
## POTATO STOCKS UP 9 PERCENT FROM YEAR EARLIER

Potato stocks as of December 1, 1981 are estimated at 188 million cwt (8.52 million metric tons) in the 15 major fall producing States. This is 9 percent above December 1, 1980 but 6 percent less than two years ago. Of the total stocks on hand in the 11 major States, 71 percent were Russets, 25 percent Whites and 4 percent Reds.

In the three Eastern States, estimated holdings are 31.2 million cwt, 15 percent above a year ago but 8 percent below December 1, 1979. Stocks in Maine total 21.3 million cwt, up 13 percent from a year ago.

(Comments continued on page 7)

## FALL POTATOES: PRODUCTION AND STOCKS



NOTE: Stocks are defined as the quantity remaining in storage for all purposes and uses, including shrinkage and waste and other losses that occur after the date of each report. Sales of fall potatoes for all purposes generally account for about 90 percent of the total fall production. Shrinkage and loss and home use account for the remaining 10 percent.

TABLE 1. FALL POTATOES: DECEMBER 1, JANUARY 1, FEBRUARY 1, MARCH 1, APRIL 1, AND MAY 1 TOTAL STOCKS, AND COMPARABLE PRODUCTION FOR 15 STATES ESTIMATING POTATO STOCKS <sup>1/</sup>

CROP YEAR	PRODUCTION	DEC 1	JAN 1	FEB 1	MAR 1	APR 1	MAY 1
1,000 CWT							
1971 <sup>2/</sup>	258,613	172,550	148,600	122,350	97,150		
1972	242,390	155,190	132,050	105,690	82,510	57,860	
1973	247,686	154,890	131,600	105,360	80,460	55,465	
1974	278,679	183,850	160,100	131,480	102,963	75,217	
1975	266,422	181,720	156,220	129,710	102,850	70,970	
1976	294,978	198,630	172,230	142,030	112,830	81,130	
1977	295,421	202,550	175,300	147,930	119,850	88,680	
1978	311,981	219,850	193,520	162,980	132,570	99,250	64,830
1979	285,060	200,820	176,020	147,910	121,720	92,550	59,535
1980	255,691	171,730	146,610	121,565	97,280	72,460	44,446
1981	281,375	187,790					

<sup>1/</sup> SEE TABLE 3 FOR LIST OF 15 STATES.

<sup>2/</sup> BEGINNING WITH 1971, LATE SUMMER PRODUCTION FOR N Y - L I, WIS AND WASH HAS BEEN CLASSIFIED AS FALL.

TABLE 2. POTATOES USED FOR PROCESSING <sup>1/</sup>, SEVEN STATES, 1980 AND 1981 CROPS

STATE	STORAGE SEASON	TO DEC 1	TO JAN 1	TO FEB 1	TO MAR 1	TO APR 1	TO MAY 1	ENTIRE SEASON
IDAHO AND MALHEUR CO., OREG	1980-81 1981-82	14,460 16,720	18,710	23,230	28,110	33,570	39,210	52,720
MAINE <sup>2/</sup>	1980-81 1981-82	2,190 2,220	2,880	3,510	4,245	4,980	5,885	6,660
WASH AND OTHER AREAS, OREG	1980-81 1981-82	14,610 17,240	16,845	19,725	23,710	27,405	31,500	39,020
OTHER STATES <sup>3/</sup>	1980-81 1981-82	2,355 2,860	2,890	3,745	4,565	5,205	6,105	7,550
TOTAL	1980-81 1981-82	33,615 39,040	41,325	50,210	60,630	71,160	82,700	105,950

<sup>1/</sup> TOTAL QUANTITY RECEIVED AND USED FOR PROCESSING REGARDLESS OF THE STATE IN WHICH THE POTATOES WERE PRODUCED. DOES NOT INCLUDE QUANTITIES USED FOR POTATO CHIPS IN MAINE, MICH OR MINN. <sup>2/</sup> INCLUDES MAINE GROWN POTATOES ONLY. <sup>3/</sup> MICH, MINN AND N DAK.

TABLE 3. POTATOES: PRODUCTION AND TOTAL STOCKS OF FALL POTATOES HELD BY GROWERS, PROCESSORS, AND LOCAL DEALERS ON DECEMBER 1, 1980 AND DECEMBER 1, 1981

STATE	CROP OF 1980			CROP OF 1981		
	: DEC 1 STOCKS:		: DEC 1 STOCKS:		: DEC 1 STOCKS:	
	: PRODUCTION	: TOTAL STOCKS:	: AS % OF	: PRODUCTION	: TOTAL STOCKS:	: AS % OF
	: : DEC 1, 1980	: PRODUCTION	:	: : DEC 1, 1981	: PRODUCTION	:
	1,000 CWT	PERCENT		1,000 CWT	PERCENT	
CALIF	6,438	4,200	65	6,734	4,300	64
COLO	10,950	7,850	72	12,000	8,500	71
IDAHO	79,840	59,000	74	80,040	57,500	72
MAINE	24,960	18,900	76	26,520	21,300	80
MICH	7,403	4,500	61	7,050	5,000	71
MINN	9,920	8,400	85	13,300	9,100	68
MONT	1,725	1,630	94	1,739	1,650	95
NEBR	1,876	1,400	75	2,252	1,850	82
N Y - L I	4,794	1,850	39	5,365	1,860	35
- UPSTATE	6,250	3,100	50	6,875	4,050	59
N DAK	15,680	10,700	68	20,125	14,500	72
OHIO	1,995	500	25	1,845	680	37
OREG	19,745	13,300	67	21,710	15,200	70
PA	4,180	3,300	79	5,250	4,000	76
WASH	43,935	24,500	56	52,380	29,200	56
WIS	16,000	8,600	54	18,190	9,100	50
15 STATE TOTAL	255,691	171,730	67	281,375	187,790	67

#### RELIABILITY OF DECEMBER 1 PRODUCTION AND STOCKS ESTIMATES

To assist users in evaluating the reliability of production and stocks estimates in this report, the "Root Mean Square Error", a statistical measure based on past performance, is shown below. This is computed by expressing the deviations between the December 1 estimates and the final estimates as a percent of the final estimates and averaging the squared percentage deviations for the 1961-80 twenty year period; the square root of this average becomes statistically the "Root Mean Square Error". Probability statements can be made concerning expected errors in the current estimates relative to the final estimates, assuming that factors affecting this year's estimates are not different from those of recent years. For example, the "Root Mean Square Error" for the December 1 stocks estimate is 1.9 percent. This means that the chances are 2 out of 3 that the current estimate of 188 million cwt will not be above or below the final estimate by more than 1.9 percent or approximately 3.6 million cwt. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 3.4 percent or approximately 6.4 million cwt.

Also shown below is the 10-year (1971-80) record of the differences between the December 1 production and stocks estimates and the final estimates. Using stocks again as an example, changes between the December 1 estimate and the final estimate during the 10 years have averaged 3.07 million cwt, ranging from 0.52 million to 6.25 million cwt. During this 10-year period the December 1 estimate has been below the final estimate 9 out of 10 years.

#### RELIABILITY OF DECEMBER 1 FALL POTATO ESTIMATES

CROP AND ESTIMATE	ROOT MEAN SQUARE ERROR			TEN YEAR RECORD OF DIFFERENCE BETWEEN DEC 1 AND FINAL ESTIMATE				
	: 90% CONFIDENCE		: QUANTITY		: NUMBER OF YEARS			
	: LEVEL		: AVERAGE		: BELOW : ABOVE			
	: PERCENT:	: PERCENT: QUANTITY	: SMALLEST:	: LARGEST:	: FINAL	: FINAL		
		MILLION CWT	MILLION CWT	MILLION CWT	MILLION CWT			
FALL POTATO STOCKS	1.9	3.4	6.38	3.07	0.52	6.25	9	1
FALL POTATO PRODUCTION:	1.5	2.6	7.56	3.79	1.63	6.47	9	1

TABLE 4. FALL POTATOES: STOCKS BY TYPE AS PERCENT OF TOTAL STOCKS, DECEMBER 1, 1981,  
11 MAJOR STATES

STATE	POTATO TYPES			
	REDS	WHITES	RUSSETS	TOTAL
	PERCENT			
COLO	10	5	85	100
IDAHO			1/2/100	100
MAINE		2/71	29	100
MICH 4/				
MINN	21	50	29	100
N Y		2/3/100		100
N DAK	25	64	11	100
OREG			1/2/100	100
PA		2/100		100
WASH			1/2/100	100
WIS	6	28	66	100
11 STATE TOTAL	4	25	71	100

1/ INCLUDES SMALL QUANTITIES OF WHITES, LESS THAN 5 PERCENT OF TOTAL.

2/ INCLUDES SMALL QUANTITIES OF REDS, LESS THAN 5 PERCENT OF TOTAL.

3/ INCLUDES SMALL AMOUNT OF RUSSETS, LESS THAN 5 PERCENT OF TOTAL.

4/ NOT PUBLISHED TO AVOID DISCLOSURE OF INDIVIDUAL OPERATIONS.

FALL POTATOES

STATE	AREA HARVESTED			YIELD			PRODUCTION		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
	1,000 ACRES			CWT			1,000 CWT		
CALIF	17.2	17.4	18.2	370	370	370	6,364	6,438	6,734
COLO	39.5	36.5	40.0	290	300	300	11,455	10,950	12,000
CONN	2.1	1.8	1.8	220	225	270	462	405	486
IDAHO SW (10 COUNTIES)	30.0	23.0	24.0	335	340	325	10,050	7,820	7,800
IDAHO OTHER AREAS	300.0	277.0	301.0	250	260	240	75,000	72,020	72,240
IND	4.2	3.3	3.0	255	220	205	1,071	726	615
MAINE	113.0	104.0	104.0	245	240	255	27,685	24,960	26,521
MASS	3.4	3.4	3.3	220	220	225	748	748	743
MICH	32.0	31.5	30.0	250	235	235	8,000	7,403	7,050
MINN	68.0	64.0	70.0	190	155	190	12,920	9,920	13,300
MONT	7.5	6.9	7.4	240	250	235	1,800	1,725	1,739
NEBR	5.7	6.7	7.9	260	280	285	1,482	1,876	2,252
NEV	15.0	13.0	12.0	330	340	290	4,950	4,420	3,480
N Y LONG ISLAND	21.8	18.8	18.5	295	255	290	6,431	4,794	5,365
N Y UPSTATE	23.5	25.0	25.0	275	250	275	6,463	6,250	6,875
N DAK	114.0	112.0	115.0	160	140	175	18,240	15,680	20,125
OHIO	10.0	9.5	9.0	240	210	205	2,400	1,995	1,845
OREG MALHEUR	13.0	10.0	10.0	370	365	345	4,810	3,650	3,450
OREG OTHER AREAS	50.0	37.0	44.0	410	435	415	20,500	16,095	18,260
PA	24.0	22.0	21.0	250	190	250	6,000	4,180	5,250
R I	3.3	3.2	3.2	230	230	250	759	736	800
S DAK	6.5	6.7	5.4	185	160	130	1,203	1,072	702
UTAH	5.5	5.2	5.8	250	225	220	1,375	1,170	1,276
VT	.7	.6	.7	210	200	210	147	120	147
WASH	102.0	67.0	108.0	475	505	465	48,450	43,935	52,380
WIS	54.0	50.0	53.5	315	320	340	17,010	16,000	18,190
WYO	5.2	5.7	5.3	220	235	200	1,144	1,340	1,060
U S	1,071.1	981.2	1,047.0	277	272	278	296,919	266,428	290,684

TABLE 6. AREA PLANTED, FALL POTATOES

STATE	1979	1980	1981
	1,000 ACRES		
CALIF	17.4	17.4	18.2
COLO	40.0	37.0	40.5
CONN	2.1	1.8	1.8
IDAHO - SW CO.	30.0	23.0	24.0
- OTHER CO.	305.0	282.0	306.0
IND	4.3	3.6	3.3
MAINE	116.0	108.0	106.0
MASS	3.5	3.4	3.3
MICH	33.0	32.5	32.0
MINN	70.0	65.0	73.0
MONT	7.5	7.0	7.5
NEBR	6.0	6.9	8.0
NEV	15.0	13.0	12.0
N Y - L I	22.0	19.0	18.5
- UPSTATE	25.5	26.0	26.5
N DAK	121.0	114.0	119.0
OHIO	10.4	10.0	9.8
OREG - MALHEUR CO.	13.5	10.5	10.3
- OTHER CO.	52.0	37.5	44.7
PA	25.0	23.0	22.0
R I	3.4	3.2	3.2
S DAK	7.3	7.3	5.5
UTAH	5.6	5.3	5.9
VT	.7	.6	.7
WASH	102.0	87.0	108.0
WIS	57.0	52.5	55.0
WYO	5.5	5.8	5.5
TOTAL	1,100.7	1,002.3	1,070.2

#### 1981 POTATO OBJECTIVE YIELD SURVEY

The Statistical Reporting Service conducted potato objective yield surveys in the 11 major fall producing States in 1981. Sample plots were located in potato fields that were selected on a random basis using a scientifically designed sampling procedure. Field workers recorded counts and measurements from these fields just prior to and immediately after harvest.

The sample data from the objective yield surveys presented in the following tables are presented to provide current information about the crop and are not official estimates.

TABLE 7: POTATOES: HARVEST LOSS BY TYPE OF POTATOES, 1980-81 1/

STATE AND YEAR		:	ROUND REDS	:	ROUND WHITES	:	RUSSETS	:	ALL TYPES
		:	CWT PER ACRE						
COLO	1980	:	2/	:	2/	:	35	:	35
	1981	:	29	:	2/	:	31	:	30
IDAHO	1980	:	2/	:	2/	:	38	:	38
	1981	:	2/	:	2/	:	28	:	28
MAINE	1980	:	2/	:	24	:	32	:	26
	1981	:	2/	:	21	:	24	:	22
MICH	1980	:	2/	:	29	:	43	:	33
	1981	:	2/	:	15	:	32	:	19
MINN	1980	:	15	:	21	:	25	:	21
	1981	:	19	:	27	:	24	:	24
N Y	1980	:	2/	:	20	:		:	20
	1981	:	2/	:	19	:	2/	:	22
N DAK	1980	:	26	:	24	:	35	:	26
	1981	:	24	:	28	:	42	:	28
OREG	1980	:		:	2/	:	29	:	28
	1981	:		:	2/	:	22	:	23
PA	1980	:	2/	:	32	:		:	32
	1981	:	2/	:	24	:		:	23
WASH	1980	:	2/	:	2/	:	28	:	28
	1981	:		:	2/	:	24	:	23
WIS	1980	:	2/	:	25	:	31	:	31
	1981	:	33	:	17	:	20	:	21

1/ POTATOES LEFT IN THE FIELD AT TIME OF HARVEST. 2/ INSUFFICIENT SAMPLE SIZE.

TABLE 8: POTATOES: AVERAGE NUMBER OF HILLS PER ACRE, BY TYPE, 1980-81 1/

STATE AND YEAR		ROUND REDS		ROUND WHITES		RUSSETS	
		NUMBER	AV. NO.	NUMBER	AV. NO.	NUMBER	AV. NO.
		OF	HILLS	OF	HILLS	OF	HILLS
		SAMPLES	PER ACRE	SAMPLES	PER ACRE	SAMPLES	PER ACRE
COLO 1980	:	8	12,144	2/	2/	67	11,520
	:	8	13,057	2/	2/	64	11,479
IDAHO 1980	:	2/	2/	2/	2/	292	12,577
	:	2/	2/	2/	2/	321	12,570
MAINE 1980	:	2/	2/	126	16,014	55	10,783
	:	2/	2/	138	15,018	46	10,370
MICH 1980	:	2/	2/	73	12,223	31	11,489
	:	2/	2/	70	12,302	34	10,430
MINN 1980	:	26	10,736	68	10,119	36	9,910
	:	33	9,876	67	9,813	30	10,623
N Y 1980	:	6	14,309	128	13,489		
	:	7	12,244	97	13,970	2/	2/
N DAK 1980	:	46	10,037	112	9,961	21	9,998
	:	35	9,246	122	9,751	12	9,085
OREG 1980	:			6	12,722	137	13,600
	:			2/	2/	143	13,709
PA 1980	:	2/	2/	70	12,638		
	:			76	12,347		
WASH 1980	:	2/	2/	13	13,213	149	13,798
	:			12	12,571	153	13,924
WIS 1980	:	16	13,141	30	13,161	73	10,683
	:	17	13,441	38	12,670	77	10,789

1/ BASED ON COUNTS FROM OBJECTIVE YIELD MEASUREMENTS. 2/ INSUFFICIENT SAMPLE SIZE.

Estimated stocks in the six Central States are 40.2 million cwt, 18 percent greater than a year earlier and virtually the same as on December 1, 1979. North Dakota's stocks are up 36 percent compared with a year ago while Minnesota and Wisconsin stocks are up 8 and 6 percent, respectively. Holdings in the six Western States total 116 million cwt, 5 percent greater than on December 1, 1980 but 8 percent below two years ago. Idaho's stocks are estimated at 57.5 million cwt, 3 percent less than a year earlier. Holdings in Washington and Oregon are up 19 and 14 percent, respectively, from December 1, 1980.

Disappearance to December 1, 1981 in the 15 major fall States totals 93.6 million cwt, 11 percent above the same period a year ago. This includes 13.7 million cwt of potatoes dumped during grading, fed to livestock on potato farms, discarded without grading, and lost to shrinkage (moisture loss).

Potatoes processed to December 1, 1981 in the seven major processing States total 39.0 million cwt, 16 percent more than the same period a year ago.

#### FALL PRODUCTION UP 9 PERCENT

Production of fall potatoes in the U.S. (24 States) is estimated at 291 million cwt (13.2 million metric tons), 9 percent above the 1980 crop, but 2 percent below 1979. Harvested area in the U.S. totaled 1.05 million acres (424 thousand hectares), 7 percent greater than 1980 but 2 percent less than in 1979. The average U.S. yield at 278 cwt per acre was 6 cwt above last year and 1 cwt above the 1979 yield.

In the seven Eastern States, production is estimated at 46.2 million cwt, 9 percent above last year's drought reduced crop but 5 percent below 1979. Harvested area totaled 178 thousand acres, down 1 percent from 1980 and 7 percent less than two years ago. Average yield at 260 cwt per acre was 24 cwt above last year and 6 cwt above 1979. Production in Maine is placed at 26.5 million cwt, 6 percent above the 1980 crop. Late season rains created problems with the Maine potato crop, and some acreage was not harvested because of wet conditions. However, yields were generally better than last year. Wet conditions in Upstate New York during latter October also caused some loss of acreage and reduced yields.

Production in the eight Central States is estimated at 64.1 million cwt, up 17 percent from 1980 and 3 percent above 1979. The average yield at 218 cwt per acre was 25 cwt above a year ago and 6 cwt greater than the 1979 yield. Harvested area totaled 294 thousand acres, 4 percent more than 1980 but slightly less than two years ago. North Dakota's production is set at 20.1 million cwt, 28 percent above 1980. Freezing temperatures during the third week of October caused considerable damage in the Red River Valley. Significant acreage was abandoned while other acreage was later harvested and sold to processors at a discount or was dumped. Acreage and yields were also reduced in Michigan due to excessive rain late in the season. Compared with last year, production in Wisconsin and Minnesota was up 14 and 34 percent, respectively.

In the 9 Western States production totaled 180 million cwt, up 6 percent from last year but 3 percent below the 1979 crop. Yields averaged 313 cwt per acre, 14 cwt below last year and 5 cwt less than in 1979. Harvested area at 576 thousand acres, was 11 percent greater than a year ago but 2 percent below 1979. Idaho's production is estimated at 80.0 million cwt, slightly above 1980 but 6 percent below two years ago. Although much of the Idaho crop was later than normal, harvesting conditions were generally good and acreage lost was near average. However, with the atypical growing season there are more small and very large potatoes than normal and a smaller percent grading U.S. #1 potatoes than last year. Production in Washington and Oregon is up 19 and 10 percent from 1980, respectively. Yields in these two States were reduced by the extremely hot weather late in the growing season.

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